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Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals

Sub-Committee of Experts on the Transport of Dangerous Goods

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Item 2 (e) of the provisional agenda
Explosives and related matters: miscellaneous

Harmonized international standard for explosives traceability markings

Transmitted by the Institute of Makers of Explosives (IME)[1]

Summary

1. In this paper, for articles and substances of Class 1, if marked for traceability purposes, IME seeks to:

(a) Establish a harmonized format for such markings and

(b) Add a new section 1.4.4 to Chapter 1.4 of the Model Regulations that describes said harmonized format.

Introduction

2. At the forty-third session of the Sub-Committee in informal document INF.18, IME discussed that there is a critical need for successful tracing of recovered explosives, and that the placement of marks on articles and substances of Class 1 based on a harmonized marking format could be a critical component of successful tracing globally.

[1] In accordance with the programme of work of the Sub-Committee for 2013-2014 approved by the Committee at its sixth session (refer to ST/SG/AC.10/C.3/84, para. 86 and ST/SG/AC.10/40, para. 14).

3. The Working Group on Explosives (EWG) agreed that a harmonized format for marking, most likely based on the European Union format, might be worthwhile.[2]

4. The Sub-Committee agreed with the EWG and encouraged IME to submit a formal proposal.[3]

Discussion

5. It is well known that many countries and law enforcement agencies desire to have explosives uniquely identified to facilitate their traceability in the event of loss, theft or for security purposes. When present, such a marking would assist law enforcement and government officials to determine from where confiscated, discovered, and/or recovered explosives were acquired. Establishing from where in the chain of custody such explosives were acquired may assist these officials in identifying those who may have illicitly obtained such explosives and may aid in reducing the availability of such explosives, thus increasing the overall security of the world from attacks using explosive articles and/or substances.

6. Indeed, within the European Union Directive 2008/43/EC mandates such a marking system. Other countries have also recently mandated, or have under consideration, requirements for marking, serialization and/or traceability of explosives. These include: Argentina, Australia, Brazil, Canada, China, India, Kazakhstan, Peru, and Russia.

7. The result is a proliferation of disparate systems instituting differing formats of marking for traceability. These disparate systems create two issues namely, (1) the complexity of tracing products that illegally cross country boundaries, and (2), the added complexity to manufacturers who have to identify, maintain inventories and record individual lots that are destined for the different countries. The added complexity for the manufacturers and the fact that products enter countries illegally would make traceability of such a product significantly more difficult and, since there is no coordination of serialization systems, the same marking could have different meanings in different countries.

8. When used, IME proposes to standardize such traceability markings globally into a harmonized format so that interpretation of those markings can be done quickly and efficiently enabling law enforcement officials to advance their investigations without undue delays. Since almost all articles and substances of Class 1 must at some time be transported, the United Nations Recommendations on the Transport of Dangerous Goods, in the form of the Model Regulations, appears to be the most appropriate instrument to enable such harmonized identification information to be adopted universally.

9. The structure proposed by IME recognizes that the key information for traceability is the name and location of the manufacturer of the product and a code that can be used to uniquely identify the individual explosive item. The proposal only deals with the format of such a marking and does not advocate any physical or chemical modification of the explosive material contained in the product (chemical or microscopic identifiers/"taggants").

10. The structure proposed by IME is based on the harmonized system of the European Commission Directive 2008/43/EC (as amended by Directive 2012/4/EU), which is believed to be the most commonly used marking format. Much of global industry has already adopted this format for transport to, within, and through the European Union. Since

[2] Informal document INF.61/Rev.1, para. 21

[3] ST/SG/AC.10/C.3/86, para. 33

the proposed marking format simply extends the country identifier beyond that of the EU, it is believed that such a format would have little or no impact on markings already being done within the European Union.

11. It is IME's hope that those countries outside of the European Union that have already mandated traceability marking requirements will accept the proposed format as an acceptable alternative to that which they may have already mandated. Additionally, it is hoped that those countries planning to mandate such marking will accept the proposed format as their mandated format or at least as an acceptable alternative

Proposal

12. The Sub-Committee is requested to add a new section 1.4.4, additional requirements applicable to the transport of articles and substances of Class 1 to Chapter 1.4 of the Model Regulations. The text of the proposed new section 1.4.4 is provided in the annex to this document.

Annex

1.4.4 Additional requirements applicable to the transport of articles and substances of Class 1

1.4.4.1 ***Provisions for the unique identification of articles and substances of Class 1***

1.4.4.1.1 Competent authorities may consider establishing a program for the unique product identification marking of articles or substances of Class 1 that includes an identification format that addresses the elements specified in 1.4.4.1.2.

1.4.4.1.2 The unique product identification mark shall comprise at least the following elements:

(a) A human readable part of the identification mark containing the following:

i) the name of the manufacturer;

(ii) an alphanumeric code containing:

1. the ISO 3166-1 alpha-2 code indicating the country of production;

2. three digits identifying the name of the manufacturing site (attributed by the competent authority); and

3. the unique product code and logistical information designed by the manufacturer.

(b) An electronic readable identification mark in barcode and/or matrix code format that relates directly to the alphanumerical identification code, when required by the competent authority or if desired by the manufacturer. The electronic readable identification may include additional code that facilitates access to other product information such as safety and handling instructions.

(c) An example of the marking described above follows: